

## SOIL-AMELIORATIVE ASPECTS OF IRRIGATION RECOMMENCEMENT IN THE SOUTH OF UKRAINE

L.I. Vorotyntseva

National Scientific Center "Institute for Soil Science and Agrochemistry Research  
named after O.N. Sokolovsky", Kharkiv, Ukraine  
E-mail: chief\_chief@mail.ru

The objective was to justify the need of irrigation recommencement and expansion of irrigation areas. We studied state of dark chestnut soil and made the assessment of the regeneration degree of its properties over 15 years after found out from irrigation. The Investigations were carried out on the example of the pilot farms – SC "Radyans'ka zemlya", Belozersky district, Kherson region, in the Ingulets irrigation system. The program included studies of physical-chemical, chemical and physical properties of soil and irrigation water quality. In the post-irrigation period (over 15 years) the gradual regeneration of the properties of the long irrigated soil occurs. The processes of desalinization (reduction of toxic salts content to 0.04-0.08 %), dealkalinization (decrease of the exchangeable sodium and potassium concentration to 2.5-2.9 %), decompaction are developed. In the soil the amount of agronomically useful structure aggregates (10 %) was increased. The content of lumpy fraction (8-9 %) was decreased.

On the basis of the results of the integrated soil assessment this soil is recommended for introduction in irrigated agriculture.

**Keywords:** irrigation recommencement, soil, found out from irrigation, irrigation water, irrigation, soil-ameliorative properties, transformation.

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## ПОЧВЕННО-МЕЛИОРАТИВНЫЕ АСПЕКТЫ ВОССТАНОВЛЕНИЯ ОРОШЕНИЯ НА ЮГЕ УКРАИНЫ

Л.И. Воротынцева

**Национальный научный центр «Институт почвоведения и агрохимии имени А.Н. Соколовского», Харьков, Украина**  
E-mail: chief\_chief@mail.ru

Целью работы было обоснование восстановления и расширения площадей орошения с учетом почвенно-мелиоративных показателей состояния темно-каштановой почвы, временно выведенной из орошения, на основании оценки степени восстановленности ее свойств. Исследования проводили на примере пилотного хозяйства - СК «Советская земля» Белозерского района Херсонской области в условиях Ингулецкой оросительной системы на темно-каштановой почве.

Установлено, что в постирригационный период (в течение 15 лет после прекращения орошения) происходит постепенная трансформация свойств длительно орошаемой почвы. В ней развиваются процессы рассоления (снижение содержания токсичных солей до 0,04-0,08 %), рассолонцевания (уменьшение концентрации обменных натрия и калия до 2,5-2,9 %), разуплотнение. В почве возросло количество структурных отдельностей размером 0,25-10,0 мм (на 10 %) и снизилось содержание глыбистой фракции (на 8-9 %). На основании результатов комплексной оценки данная почва рекомендуется для введения в орошаемое производство.

**Ключевые слова:** возобновление орошения, выведенная из орошения почва, оросительная вода, орошение, почвенно-мелиоративные показатели, трансформация.